

HAIR COLORANT APPLICATOR

FIELD OF THE INVENTION

The present invention relates to an apparatus for applying hair colorant. The invention is particularly applicable where there is a need to apply hair colorant to localised areas, for example to hair roots and hairlines.

BACKGROUND TO THE INVENTION

Approximately 20-30% of the female population dye or color their hair from time to time. Hair colorants or dyes are commercially available in a pack for use in the home. Such a pack typically includes a container of a peroxide developer with a lid in the form of a removable nozzle that may be unscrewed from a neck of the applicator. The pack also contains a bottle of liquid dye and a pair of plastic gloves. The dye is firstly added to the peroxide developer in the soft-sided bottle and mixed to form a coloring mixture that is applied to the hair through the nozzle. The mixture is rubbed into the hair with the gloves being worn to prevent staining of the hands.

There are a number of problems associated with the prior-art approach described above. One problem is that the approach is not well suited to retouching the roots of the hair after the hair has grown out of the scalp subsequent to initial dying. This is because there are difficulties in applying small amounts of the dye mixture to particular locations of the scalp. Another problem is that the measuring and mixing of the peroxide developer and the liquid dye is inconvenient.

It is an object of the present invention to provide a hair colorant applicator that overcomes, or at least ameliorates, one or more of the above problems.

SUMMARY OF THE INVENTION

According to a first aspect of the invention there is provided a hair colorant applicator including:

- a container containing a first part of a two-part hair colorant;
- a subcontainer containing a second part of the two-part hair colorant and suspended into the first part of the two-part hair colorant;
- an assembly arranged to selectively rupture the subcontainer in order to mix the first part and the second part of the two-part hair colorant.

Preferably the subcontainer is suspended from a rim of the container and further includes:

a cap covering the opening; and

5 a forcing member arranged to transfer rupturing force to a lower portion of the subcontainer from the cap in use, thereby releasing the second part into the first part.

In a preferred embodiment the applicator further includes a sponge affixed to the cap for applying the hair colorant and arranged to communicate with the interior of the container by means of an aperture formed in the cap.

10 The forcing member may be arranged to seal the aperture in a first configuration and to unseal the aperture upon transferring rupturing force to the lower portion of the subcontainer in use.

The container is preferably deformable so that in use a desired quantity of hair colorant may be forced through the aperture.

15 The forcing member will typically include a tubular body.

Preferably a rim of the tubular body abuts a ledge protruding from an inside wall of the lower portion of the subcontainer.

The tubular body may include a flange located to prevent the forcing member falling into the container subsequent to releasing of the second part into the first part.

20 In a preferred embodiment the flange is arranged to abut a portion of the cap prior to releasing of the second part into the first part.

Further preferred features of the present invention will be described in the following detailed description which will refer to a number of figures as follows.

25 BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a side view of a hair colorant applicator according to a preferred embodiment of the present invention.

Figure 2 is a side cross-sectional view of the hair colorant applicator of Figure 1.

30 Figure 3 is an exploded perspective view of the hair colorant applicator of Figures 1 and 2.

DETAILED DESCRIPTION OF EXEMPLARY EMBODIMENTS

Figures 1, 2 and 3 are respectively a plan side view, a cross-sectional side view and an exploded perspective view of a hair colorant applicator according to a preferred embodiment of the present invention. The applicator includes a container in the form of a bottle 2 which is preferably made of a deformable plastic so that it may be squeezed. The bottle contains a first part 7 of a two-part hair colorant mixture.

Located within the bottle is a sub-container in the form of a cup or "thimble" 8 which has a flange 20 that rests upon the top of the rim 26 of bottle 2 so that thimble 8 is suspended in the first part of the mixture. The thimble contains the second part 5 of the two-part hair colorant mixture. The thimble is formed with an upper portion 12 and a lower portion 10 separated by an internal ledge 24. The wall of the thimble adjacent ledge 24 is thinned to form a circle of weakness 28 that is frangible in use as will be explained.

The applicator further includes a forcing member in the form of a hollow plug 15, which has a tubular body surrounded by an external flange 14. At its upper end plug 15 terminates in a sealing member in the form of an axial spike 18. The axial spike is supported by three radial spokes 30 which are connected to the plug. Plug 15 is inserted into thimble 8 so that the bottom rim 13 of the plug sits upon ledge 24 of the thimble.

The applicator also includes a hollow cap 4 upon which a sponge 6 is affixed. Cap 4 has an internal thread which mates with a corresponding thread on the neck of bottle 2. The cap has a ledge 16, the underside of which abuts the upper side of flange 14 of plug 15. An aperture 22 is located at the centre of the cap and is obstructed by spike 18.

In use the applicator is provided for purchase in a first configuration as shown in Figure 2 wherein thimble 8 is intact so that the first and second portions of the hair colorant mixture are separated and wherein spike 18 seals aperture 22. A purchaser of the applicator brings the applicator to a second configuration, in which mixing of the first and second parts occurs, by rotating cap 4 so that the underside of ledge 16 is forced against flange 14 of plug 15. Consequently the underside of the lower rim 13 of plug 15 is forced against ledge 24 of thimble 8 until sufficient force is applied to rupture the circle of weakness 28 between the upper 12 and lower 10 portions of

thimble 8. Upon sufficient force being applied the lower portion 10 of the thimble detaches and falls to the bottom of bottle 2.

As the lower portion of the thimble falls, the second part of the mixture that it contains is released into the first-part in the bottle so that the colorant mixture is formed. It will be realised that by suspending thimble 8 within the body of container 2 a thorough and speedy mixing of the first and second parts is achieved upon rupturing the thimble. Simultaneously plug 15 falls through a small distance until the underside of flange 14 abuts the upper side of rim 20. The distance through which plug 15 falls is sufficient to remove spike 18 from aperture 22 of cap 4 so that the aperture is no longer sealed.

The purchaser then shakes the bottle in order to ensure that the two parts of the colorant mix adequately. The bottle is then squeezed thereby forcing some of the mixture through aperture 22 in order to wet sponge 6 with the mixture. Sponge 6 is then applied to the particular areas of the scalp where it is required. Due to the fact that the degree of wetting of the sponge can be controlled by the degree to which bottle 2 is squeezed, inadvertent application of colorant mixture at undesired locations can be easily avoided. That is, the present invention provides a means for precisely and conveniently applying colorant as, for example, is required for retouching hair roots and hairline. It has been found that sufficient colorant can be applied by means of the sponge to effect satisfactory coloring of the hair while maintaining relatively precise control of the areas to which the colorant is applied.

The embodiments of the invention described herein are provided for purposes of explaining the principles thereof, and are not to be considered as limiting or restricting the invention since many modifications may be made by the exercise of skill in the art without departing from the scope of the following claims.